

MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**Doane Pet Care Company
218 NE Lincoln Avenue
Portland, IN 47371**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 075-13850-00010	
Issued by:Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 22, 2002 Expiration Date: April 22, 2007

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 and A.2 are descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary pet food manufacturing source.

Authorized Individual: Joe Herrud
Source Address: 218 NE Lincoln Avenue, Portland, IN 47371
Mailing Address: 218 NE Lincoln Avenue, Portland, IN 47371
Phone Number: 219-726-7163
SIC Code: 2047
County Location: Jay
County Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit
Minor Source, under PSD
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) Two (2) natural gas-fired boilers, using propane as back-up fuel, identified as Boiler #1 and Boiler #2, installed in 1974, exhausting through Stacks ST22 and ST23, rated at 8.3 million British thermal units per hour, each.
- (b) One (1) hammermill, identified as Hammermill (Bliss), installed in 1974, equipped with a baghouse for particulate control, exhausting through Stack ST01, capacity: 10 tons of pet food per hour.
- (c) One (1) hammermill, identified as Hammermill (Champion), installed in 1980, equipped with a cyclone for particulate control, exhausting through Stack ST02, capacity: 8 tons of pet food per hour.
- (d) One (1) truck receiving operation, consisting of a grain elevator, installed in 1981, capacity: 40 tons of pet food per hour.
- (e) Five (5) storage silo's, capacity: 22.5 tons per hour of grain, total.

Pet Food Process line number 1

- (f) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #1, installed in 1989, equipped with a cyclone for particulate control, exhausting through Stack ST05, rated at 6.0 million British thermal units per hour, capacity: 10 tons per hour of pet food.
- (g) One (1) extruder, identified as Extruder #1, installed in 1979, equipped with a cyclone for

particulate control, exhausting through Stack ST03, capacity: 7 tons of pet food per hour.

Pet food process line number 2

- (h) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #2, installed in 1991, equipped with a cyclone for particulate control, exhausting through Stack ST06, rated at 11.2 million British thermal units per hour, capacity: 10 tons per hour of pet food.
- (i) One (1) extruder, identified as Extruder #2, installed in 1979, equipped with a cyclone for particulate control, exhausting through Stack ST04, capacity: 10 tons of pet food per hour.

Biscuit line number 1

- (j) One (1) natural gas-fired oven, equipped with six (6) burners, using propane as back-up fuel, identified as Oven #1, installed in 1989, exhausting through Stacks ST07 through ST12, rated at 7.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (k) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #3, installed in 1989, equipped with a cyclone for particulate control, exhausting through Stack ST19, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

Biscuit line number 2

- (l) One (1) natural gas-fired oven, equipped with three (3) burners, using propane as back-up fuel, identified as Oven #2, installed in 1991, exhausting through Stacks ST13 through ST15, rated at 4.5 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (m) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #4 , installed in 1991, equipped with a cyclone for particulate control, exhausting through Stack ST20, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

Biscuit line number 3

- (n) One (1) natural gas-fired oven, equipped with three (3) burners, using propane as back-up fuel, identified as Oven #3, installed in 1993, exhausting through Stacks ST16 through ST18, rated at 4.5 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (o) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #5 , installed in 1993, equipped with a cyclone for particulate control, exhausting through Stack ST21, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

SECTION B

GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to 40 CFR 124.15, 40 CFR 124.19, and 40 CFR 124.20, the effective date of this permit will be thirty (30) days after the service of notice of the decision, except as provided in 40 CFR 124. Three (3) days shall be added to the thirty (30) day period if service of notice is by mail.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

B.5 Minor Source Operating Permit [326 IAC 2-6.1]

- (a) This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1.
- (b) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).
- (c) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in this permit. If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

B.6 Permit Term [326 IAC 2-6.1-7]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications or amendments of this permit do not affect the expiration date.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of all criteria pollutants is less than two hundred fifty (250) tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit PM₁₀, SO₂, VOC, NO_x or CO to 100 tons per year from this source, shall cause this source to be considered a major source under 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

C.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-7]

Any change or modification which may increase potential to emit to ten (10) tons per year of any single hazardous air pollutant, twenty-five (25) tons per year of any combination of hazardous air pollutants from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

C.3 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.4 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to 326 IAC 2-6.1-6(d)(3):

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by a notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.8 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.9 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.10 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

- (a) Compliance testing on new emissions units shall be conducted within sixty (60) days after achieving maximum production rate, but no later than one hundred eighty (180) days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ, within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission con-

trol equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a) (1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.16 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the

Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Response Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (c) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) A malfunction as described in 326 IAC 1-6-2; or
 - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
 - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.
- (e) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (f) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.18 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015
- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (b) One (1) hammermill, identified as Hammermill (Bliss), installed in 1974, equipped with a baghouse for particulate control, exhausting through Stack ST01, capacity: 10 tons of pet food per hour.
- (c) One (1) hammermill, identified as Hammermill (Champion), installed in 1980, equipped with a cyclone for particulate control, exhausting through Stack ST02, capacity: 8 tons of pet food per hour.
- (d) One (1) truck receiving operation, consisting of a grain elevator, installed in 1981, capacity: 40 tons of pet food per hour.
- (e) Five (5) storage silo's, capacity: 22.5 tons per hour of grain, total.

Pet Food Process line number 1

- (f) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #1, installed in 1989, equipped with a cyclone for particulate control, exhausting through Stack ST05, rated at 6.0 million British thermal units per hour, capacity: 10 tons per hour of pet food.
- (g) One (1) extruder, identified as Extruder #1, installed in 1979, equipped with a cyclone for particulate control, exhausting through Stack ST03, capacity: 7 tons of pet food per hour.

Pet food process line number 2

- (h) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #2, installed in 1991, equipped with a cyclone for particulate control, exhausting through Stack ST06, rated at 11.2 million British thermal units per hour, capacity: 10 tons per hour of pet food.
- (i) One (1) extruder, identified as Extruder #2, installed in 1979, equipped with a cyclone for particulate control, exhausting through Stack ST04, capacity: 10 tons of pet food per hour.

Biscuit line number 1

- (j) One (1) natural gas-fired oven, equipped with six (6) burners, using propane as back-up fuel, identified as Oven #1, installed in 1989, exhausting through Stacks ST07 through ST12, rated at 7.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (k) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #3, installed in 1989, equipped with a cyclone for particulate control, exhausting through Stack ST19, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

Biscuit line number 2

- (l) One (1) natural gas-fired oven, equipped with three (3) burners, using propane as back-up fuel, identified as Oven #2, installed in 1991, exhausting through Stacks ST13 through ST15, rated at 4.5 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (m) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #4, installed in 1991, equipped with a cyclone for particulate control, exhausting through Stack ST20, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

Biscuit line number 3

- (n) One (1) natural gas-fired oven, equipped with three (3) burners, using propane as back-up fuel, identified as Oven #3, installed in 1993, exhausting through Stacks ST16 through ST18, rated at 4.5 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (o) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #5, installed in 1993, equipped with a cyclone for particulate control, exhausting through Stack ST21, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable particulate matter (PM) emission rate from the one (1) truck receiving operation, consisting of a grain elevator, installed in 1981, shall not exceed 42.5 pounds per hour when operating at a process weight rate of forty (40) tons, or 80,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable particulate matter (PM) emission rate from the five (5) storage silo's, shall not exceed 33.0 pounds per hour, total, when operating at a process weight rate of 22.5 tons, or 44,500 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable particulate matter (PM) emission rate from the one (1) hammermill, identified as Hammermill (Bliss), the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #1, the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #2, the one (1) extruder, identified as Extruder #2, shall not exceed 19.2 pounds per hour when operating at a process weight rate of ten (10) tons, or 20,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (d) Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable particulate matter (PM) emission rate from the one (1) Hammermill, identified as Hammermill (Champion), shall not exceed 16.5 pounds per hour when operating at a process weight rate of eight (8) tons, or 16,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (e) Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable particulate matter (PM) emission rate from the one (1) extruder, identified as Extruder #1, shall not exceed 15.1 pounds per hour when operating at a process weight rate of seven (7) tons, or 14,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (f) Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable particulate matter (PM) emission rate from the one (1) natural gas-fired dryer using propane as back-up fuel, identified as Dryer #3, installed in 1989, the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #4, installed in 1991 and the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #5, installed in 1993, shall not exceed 5.97 pounds per hour, each, when operating at a process weight rate of 1.75 tons, or 3,500 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these emission units and their control devices.

Compliance Determination Requirements [326 IAC 2-1.1-11]

There are no specific Compliance Determination Requirements applicable to these emission units.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Two (2) natural gas-fired boilers, using propane as back-up fuel, identified as Boiler #1 and Boiler #2, installed in 1974, exhausting through Stacks ST22 and ST23, rated at 8.3 million British thermal units per hour, each.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(e), the allowable PM emission rate from the two (2) boilers, identified as Boiler #1 and Boiler #2, shall not exceed 0.6 pounds per million British thermal units heat input.

Compliance Determination Requirements [326 IAC 2-1.1-11]

There are no specific Compliance Determination Requirements applicable to these emission units.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Doane Pet Care Company
Address:	218 NE Lincoln Avenue
City:	Portland, Indiana 47371
Phone #:	219-726-7163
MSOP #:	075-13850-00010

I hereby certify that Doane Pet Care Company is
☒ still in operation.
☐ no longer in operation.

I hereby certify that Doane Pet Care Company is
☒ in compliance with the requirements of MSOP **075-13850-00010**.
☐ not in compliance with the requirements of MSOP **075-13850-00010**.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name:	Doane Pet Care Company
Source Location:	218 NE Lincoln Avenue, Portland, IN 47371
County:	Jay
SIC Code:	2047
Operation Permit No.:	MSOP 075-13850-00010
Permit Reviewer:	Craig J. Friederich

The Office of Air Quality (OAQ) has reviewed an application from Doane Pet Care Company relating to the operation of a pet food manufacturing source.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Two (2) natural gas-fired boilers, using propane as back-up fuel, identified as Boiler #1 and Boiler #2, installed in 1974, exhausting through Stacks ST22 and ST23, rated at 8.3 million British thermal units per hour, each.
- (b) One (1) hammermill, identified as Hammermill (Bliss), installed in 1974, equipped with a baghouse for particulate control, exhausting through Stack ST01, capacity: 10 tons of pet food per hour.
- (c) One (1) hammermill, identified as Hammermill (Champion), installed in 1980, equipped with a cyclone for particulate control, exhausting through Stack ST02, capacity: 8 tons of pet food per hour.
- (d) One (1) truck receiving operation, consisting of a grain elevator, installed in 1981, capacity: 40 tons of pet food per hour.
- (e) Three (3) storage silo's, capacity: 22.5 tons per hour of grain for all five (5) silo's, including the two (2) exemption level unpermitted silos.

Pet Food Process line number 1

- (f) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #1, installed in 1989, equipped with a cyclone for particulate control, exhausting through Stack ST05, rated at 6.0 million British thermal units per hour, capacity: 10 tons per hour of pet food.

- (g) One (1) extruder, identified as Extruder #1, installed in 1979, equipped with a cyclone for particulate control, exhausting through Stack ST03, capacity: 7 tons of pet food per hour.

Pet food process line number 2

- (h) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #2, installed in 1991, equipped with a cyclone for particulate control, exhausting through Stack ST06, rated at 11.2 million British thermal units per hour, capacity: 10 tons per hour of pet food.
- (i) One (1) extruder, identified as Extruder #2, installed in 1979, equipped with a cyclone for particulate control, exhausting through Stack ST04, capacity: 10 tons of pet food per hour.

Biscuit line number 1

- (j) One (1) natural gas-fired oven, equipped with six (6) burners, using propane as back-up fuel, identified as Oven #1, installed in 1989, exhausting through Stacks ST07 through ST12, rated at 7.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (k) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #3, installed in 1989, equipped with a cyclone for particulate control, exhausting through Stack ST19, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

Biscuit line number 2

- (l) One (1) natural gas-fired oven, equipped with three (3) burners, using propane as back-up fuel, identified as Oven #2, installed in 1991, exhausting through Stacks ST13 through ST15, rated at 4.5 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (m) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #4, installed in 1991, equipped with a cyclone for particulate control, exhausting through Stack ST20, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

Biscuit line number 3

- (n) One (1) natural gas-fired oven, equipped with three (3) burners, using propane as back-up fuel, identified as Oven #3, installed in 1993, exhausting through Stacks ST16 through ST18, rated at 4.5 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.
- (o) One (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #5, installed in 1993, equipped with a cyclone for particulate control, exhausting through Stack ST21, rated at 4.8 million British thermal units per hour, capacity: 1.75 tons per hour of pet food.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

- (p) Two (2) storage silo's, capacity: 22.5 tons per hour of grain for all five (5) silo's, including the two (2) exemption level unpermitted silos. (Exempt level)

New Emission Units and Pollution Control Equipment

There are no new facilities proposed at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) OP 38-01-85-0078 issued on April 22, 1981, to International Multifoods Corporation;
- (b) Registration issued June 19, 1989, to the Hubbard Milling Company;
- (c) CP 075-2084-00016 issued August 29, 1991, to the Hubbard Milling Company;
- (d) CP 075-2829-00016 issued February 24, 1993, to the Hubbard Milling Company and
- (e) A 075-8858-00010, issued October 22, 1997, to Windy Hill Pet Food Company, Inc.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
ST01	Hammermill (Bliss)	143	1.5	1400	78
ST02	Hammermill (Champion)	143	1.5	1400	78
ST03	Extruder #1	16	2.0	2500	350
ST04	Extruder #2	16	2.0	2500	350
ST05	Dryer #1	26	1.3	2500	350
ST06	Dryer #2	26	1.3	2500	350
ST07	Oven #1-Burner #1	25	1.0	1500	200
ST08	Oven #1-Burner #2	25	1.0	1500	200
ST09	Oven #1-Burner #3	25	1.0	1500	200
ST10	Oven #1-Burner #4	25	1.0	1500	200
ST11	Oven #1-Burner #5	25	1.0	200	200
ST12	Oven #1-Burner #6	25	1.0	200	200
ST13	Oven #2-Burner #1	25	1.0	200	200

ST14	Oven #2-Burner #2	25	1.0	200	200
ST15	Oven #2-Burner #3	25	1.0	200	200
ST16	Oven #3-Burner #1	25	1.0	200	200
ST17	Oven #3-Burner #2	25	1.0	200	200
ST18	Oven #3-Burner #3	25	1.0	200	200
ST19	Dryer #3	25	1.0	125	125
ST20	Dryer #4	25	1.0	125	125
ST21	Dryer #5	25	1.0	125	125
ST22	Boiler #1	30	2.0	450	450
ST23	Boiler #2	30	2.0	450	450
ST24	Silo #1	50	0.45	800	Ambient
ST25	Silo #2	50	0.45	800	Ambient
ST26	Silo #3	50	0.45	800	Ambient
ST27	Silo #4	50	0.45	800	Ambient
ST28	Silo #5	50	0.45	800	Ambient

Enforcement Issue

The unpermitted silo's potential to emit fall under exempt level status. The source should have submitted an application for an MSOP by December 25, 1999. Therefore, an enforcement referral will be filed.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 29, 2001, with additional information received on July 30, and December 20, 2001.

Emission Calculations

See Appendix A (pages 1 through 13 of 13) of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable

by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	55.9
PM ₁₀	51.0
SO ₂	0.167
VOC	1.54
CO	23.5
NO _x	43.6

HAPs	Potential To Emit (tons/year)
Benzene	0.0006
Dichlorobenzene	0.0003
Formaldehyde	0.021
Hexane	0.503
Toluene	0.001
Lead	0.0001
Cadmium	0.0003
Chromium	0.0004
Manganese	0.0001
Nickel	0.0006
TOTAL	0.527

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM₁₀, and NO_x are equal to or greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.
- (b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPS
Five (5) Natural Gas Fired Dryers	8.88	9.30	0.081	0.746	11.4	21.3	0.256
Two (2) Boilers	0.319	0.542	0.043	0.392	5.99	11.2	0.135
Three (3) Ovens	0.322	0.548	0.043	0.397	6.06	11.2	0.136
Hammermill (Bliss)	0.003	0.003	0.00	0.00	0.00	0.00	0.00
Hammermill (Champion)	0.470	0.235	0.00	0.00	0.00	0.00	0.00
Extruder #1	0.374	0.208	0.00	0.00	0.00	0.00	0.00
Extruder #2	0.534	0.298	0.00	0.00	0.00	0.00	0.00
Truck Receiving	2.98	0.438	0.00	0.00	0.00	0.00	0.00
Five (5) Storage Silos	0.003	0.003	0.00	0.00	0.00	0.00	0.00
Total Emissions	13.9	11.6	0.167	1.54	23.5	43.7	0.527

County Attainment Status

The source is located in Jay County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Jay County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Jay County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit MSOP 075-13850-00010, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than one hundred (100) tons per year,
- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) any combination of HAPs is less than twenty-five (25) tons per year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

- (a) The two (2) boilers are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because these boilers have a heat input capacity less than ten (10) million British thermal units per hour, each.
- (b) Pursuant to the definition in 40 CFR 60.301(c), this source does not contain a grain terminal elevator because this is a pet food manufacturing source. Pursuant to the definition in 40 CFR 60.301(f), this source does not contain a grain storage elevator because this source is not a wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean extraction plant. Therefore, the provisions of 40 CFR 60.300, Subpart DD, are not applicable to the one (1) truck receiving operation, consisting of a grain elevator.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Jay County and the potential to emit VOC and NO_x is less than one hundred (100) tons per year, therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-2-3 (Particulate Emissions Limitations for Facilities Constructed prior to September 21, 1983)

The two (2) boilers, identified as Boiler #1 and Boiler #2, each installed in 1974, using natural gas as a primary fuel and propane as backup fuel, with a total heat input capacity of 16.6 million British thermal units per hour, must comply with the PM emission limitation of 326 IAC 6-2-3. This limitation is based on the following equation as given in 326 IAC 6-2-3:

$$Pt = C \times a \times h / 76.5 \times Q^{0.75} \times N^{0.25}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBTU) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

h = Stack height in feet.

For the two (2) boilers, identified as Boiler #1 and Boiler #2:

$$Pt = 50 \times 0.67 \times 30.0 / 76.5 \times (16.6)^{0.75} \times 2^{0.25} = 1.34 \text{ lb/MMBtu}$$

Pursuant to 326 IAC 6-2-3 (e), PM emissions shall in no case exceed 0.6 pound per million British thermal units heat input.

Based on Appendix A, the worst case potential to emit PM emissions from the two (2) boilers limited to 0.6 pound PM per million British thermal units is 0.542 tons per year.

$$0.542 \text{ tons/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.124 \text{ lb/hr}$$
$$(0.124 \text{ lb/hr} / 16.6 \text{ MMBtu/hr}) = 0.007 \text{ lb PM} / \text{ MMBtu}$$

Therefore, the two (2) boilers identified as Boiler #1 and Boiler #2 will comply with this rule.

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) from the one (1) truck receiving operation, consisting of a grain elevator, installed in 1981, shall be limited to 42.5 pounds per hour when operating at a process weight rate of forty (40) tons, or 80,000 pounds per hour using the following equation:

Interpolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and}$$
$$P = \text{process weight rate in tons per hour}$$

Based on Appendix A, the potential PM emission rate, after controls, is:

$$2.98 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.680 \text{ lb/hr}$$

The PM emissions from the one (1) truck receiving operation are 0.680 pounds of PM per hour, which is less than the allowable of 42.5 pounds of PM per hour. Therefore, the one (1) truck receiving operation is in compliance with this rule.

- (b) The particulate matter (PM) from the five (5) storage silo's, shall be limited to 33.0 pounds per hour, total, when operating at a process weight rate of 22.5 tons, or 44,500 pounds per hour using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and}$$
$$P = \text{process weight rate in tons per hour}$$

Based on Appendix A, the potential PM emission rate, after controls, is:

$$0.003 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.0007 \text{ lb/hr}$$

The total PM emissions from the five (5) storage silo's are 0.0007 pounds of PM per hour, which is less than the allowable of 33.0 pounds of PM per hour. Therefore, the five (5) storage silo's are in compliance with this rule.

- (c) The particulate matter (PM) from the one (1) hammermill, identified as Hammermill (Bliss), the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #1, the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #2, the one (1) extruder, identified as Extruder #2, shall be limited to 19.2 pounds per hour, each, when operating at a process weight rate of ten (10) tons, or 20,000 pounds per hour using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Based on Appendix A, the potential PM emission rate, after controls, from the one (1) hammermill, identified as Hammermill (Bliss), the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #1, the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #2, the one (1) extruder, identified as Extruder #2, are all less than the allowable PM emission rate of 19.2 pounds of PM per hour. Therefore, all these emission units are in compliance with this rule.

- (d) The particulate matter (PM) from the one (1) Hammermill, identified as Hammermill (Champion), shall be limited to 16.5 pounds per hour when operating at a process weight rate of eight (8) tons, or 16,000 pounds per hour using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Based on Appendix A, the potential PM emission rate, after controls, is:

$$0.470 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.107 \text{ lb/hr}$$

The PM emissions from the one (1) Hammermill, identified as Hammermill (Champion) are 0.107 pounds of PM per hour, which is less than the allowable of 16.5 pounds of PM per hour. Therefore, the one (1) Hammermill, identified as Hammermill (Champion) is in compliance with this rule.

- (e) The particulate matter (PM) from the one (1) extruder, identified as Extruder #1, installed in 1979, shall be limited to 15.1 pounds per hour when operating at a process weight rate of seven (7) tons, or 14,000 pounds per hour using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Based on Appendix A, the potential PM emission rate, after controls, is:

$$0.374 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.085 \text{ lb/hr}$$

The PM emissions from the one (1) extruder, identified as Extruder #1 are 0.085 pounds of PM per hour, which is less than the allowable of 15.1 pounds of PM per hour. Therefore, the one (1) extruder, identified as Extruder #1 is in compliance with this rule.

- (f) The particulate matter (PM) from the one (1) natural gas-fired dryer using propane as back-up fuel, identified as Dryer #3, installed in 1989, the one (1) natural gas-fired dryer using

propane as back-up fuel, identified as Dryer #4 , installed in 1991, and the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #5, installed in 1993, shall be limited to 5.97 pounds per hour, each, when operating at a process weight rate of 1.75 tons, or 3,500 pounds per hour using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Based on Appendix A, the potential hourly PM emission rates, after controls, from the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #3, installed in 1989, the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #4 , installed in 1991, and the one (1) natural gas-fired dryer, using propane as back-up fuel, identified as Dryer #5, installed in 1993, are all less than the allowable PM emission rate of 5.97 pounds of PM per hour, each. Therefore, all these emission units are in compliance with this rule.

326 IAC 7-1 (Sulfur Dioxide Emissions Limitations)

The potential to emit sulfur dioxide from each of the two (2) boilers, identified as Boiler #1 and Boiler #2 is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 7-1 are not applicable.

Compliance Requirements

There are no compliance monitoring requirements for any of the control devices located at this source because these controls are not required to operate to comply with 326 IAC 6-3-2 or any other applicable rules.

Conclusion

The operation of this pet food manufacturing source shall be subject to the conditions of the attached proposed Minor Source Operating Permit MSOP 075-13850-00010.

Appendix A: Potential Emission Calculations

Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001

Emission Unit	Hammermill (Bliss)							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Emission Factor Source
PM	10.0	0.012	0.12	0.526	99.4%	0.001	0.003	AP-42, table 9.9.1-2 5/98
PM-10	10.0	0.012	0.12	0.526	99.4%	0.001	0.003	AP-42, table 9.9.1-2 5/98
SO ₂	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
NO _x	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
VOC	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
CO	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	

Emission Unit	Hammermill (Champion)							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Emission Factor Source
PM	8.00	0.067	0.536	2.35	80.0%	0.107	0.470	AP-42, table 9.9.1-2 5/98
PM-10	8.00	0.0335	0.268	1.17	80.0%	0.054	0.235	AP-42, table 9.9.1-2 5/98
SO ₂	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
NO _x	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
VOC	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
CO	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	

Emission Unit	Extruder #1							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Emission Factor Source
PM	7.0	0.061	0.427	1.87	80.0%	0.085	0.374	AP-42, table 9.9.1-2 5/98
PM-10	7.0	0.034	0.238	1.04	80.0%	0.048	0.208	AP-42, table 9.9.1-2 5/98
SO ₂	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
NO _x	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
VOC	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
CO	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	

Emission Unit	Extruder #2							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Emission Factor Source
PM	10.0	0.061	0.610	2.67	80.0%	0.122	0.534	AP-42, table 9.9.1-2 5/98
PM-10	10.0	0.034	0.340	1.49	80.0%	0.068	0.298	AP-42, table 9.9.1-2 5/98
SO ₂	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
NO _x	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
VOC	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
CO	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Five (5) natural gas fired dryers**

**Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

31.6

271.44

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.258	1.031	0.081	**see below	0.746	11.40

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 3 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Five (5) Natural Gas fired Dryers****HAPs Emissions****Company Name: Doane Pet Care Company****Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371****MSOP: 075-13850****Plt ID: 075-00010****Reviewer: Craig J. Friederich****Date: January 29, 2001****HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.850E-04	1.629E-04	1.018E-02	2.443E-01	4.615E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	6.786E-05	1.493E-04	1.900E-04	5.157E-05	2.850E-04	0.256

Methodology is the same as page 2.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations
Baghouse Operations**

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Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001

Process Operations From the Five (5) Dryers

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Dryer #1	80.0%	0.035	2500.0	3.8	16.4	0.750	3.29

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Dryer #2	80.0%	0.035	2500.0	3.8	16.4	0.750	3.29

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Dryer #3	80.0%	0.010	1500.0	0.6	2.82	0.129	0.563

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Dryer #4	80.0%	0.010	1500.0	0.6	2.82	0.129	0.563

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Dryer #5	80.0%	0.010	1500.0	0.6	2.82	0.129	0.563

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Two (2) Small Industrial Boilers**

**Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

16.6

142.59

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.135	0.542	0.043	**see below	0.392	5.99

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 6 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Two (2) Boilers****HAPs Emissions****Company Name: Doane Pet Care Company****Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371****Part 70: 075-13850****Plt ID: 075-00010****Reviewer: Craig J. Friederich****Date: January 29, 2001****HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.497E-04	8.556E-05	5.347E-03	1.283E-01	2.424E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	3.565E-05	7.843E-05	9.982E-05	2.709E-05	1.497E-04	0.135

Methodology is the same as page 5.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Three (3) natural gas fired ovens**

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**Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

16.8

144.31

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.137	0.548	0.043	**see below	0.397	6.06

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 8 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Three (3) Natural gas Fired Ovens****HAPs Emissions****Company Name: Doane Pet Care Company****Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371****Part 70: 075-13850****Plt ID: 075-00010****Reviewer: Craig J. Friederich****Date: January 29, 2001****HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.515E-04	8.659E-05	5.412E-03	1.299E-01	2.453E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	3.608E-05	7.937E-05	1.010E-04	2.742E-05	1.515E-04	0.136

Methodology is the same as page 7.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Potential Emission Calculations
Propane as Back-Up

Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001

Emission Unit		Two (2) boilers, rated at 8.3 MMBtu/hr each					
Pollutant	Maximum Rate (1000 gal/hr)	Emission Factor (lbs/1000 gal)	Uncontrolled	Uncontrolled	Control Efficiency (%)	Controlled	Controlled
			Emission Rate (lbs/hr)	Emission Rate (tons/yr)		Emission Rate (lbs/hr)	Emission Rate (tons/yr)
PM	0.182	0.4	0.073	0.319	0.0%	0.073	0.319
PM-10	0.182	0.4	0.0728	0.319	0.0%	0.073	0.319
SO ₂	0.182	0.018	0.003	0.014	0.0%	0.003	0.014
NO _x	0.182	14.0	2.548	11.160	0.0%	2.548	11.160
VOC	0.182	0.300	0.055	0.239	0.0%	0.055	0.239
CO	0.182	1.90	0.346	1.515	0.0%	0.346	1.515

Emission Unit		Five (5) Dryers					
Pollutant	Maximum Rate (1000 gal/hr)	Emission Factor (lbs/1000 gal)	Uncontrolled	Uncontrolled	Control Efficiency (%)	Controlled	Controlled
			Emission Rate (lbs/hr)	Emission Rate (tons/yr)		Emission Rate (lbs/hr)	Emission Rate (tons/yr)
PM	0.347	0.4	0.139	0.608	0.0%	0.139	0.608
PM-10	0.347	0.4	0.139	0.608	0.0%	0.139	0.608
SO _x	0.347	0.018	0.006	0.027	0.0%	0.006	0.027
NO _x	0.347	14.0	4.858	21.28	0.0%	4.858	21.28
VOC	0.347	0.300	0.104	0.456	0.0%	0.104	0.456
CO	0.347	1.90	0.659	2.888	0.0%	0.659	2.888

Note: Emission Factor Source: AP-42 Table 1.5-1, 10/96

**Appendix A: Potential Emission Calculations
Propane as Back-Up**

Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001

Emission Unit		Three (3) Ovens, with a maximum design rate of 0.184 (1000gal/hr) or 184 gal/hr					
Pollutant	Maximum Rate (1000 gal/hr)	Emission Factor (lbs/1000 gal)	Uncontrolled	Uncontrolled	Control Efficiency (%)	Controlled	Controlled
			Emission Rate (lbs/hr)	Emission Rate (tons/yr)		Emission Rate (lbs/hr)	Emission Rate (tons/yr)
PM	0.184	0.4	0.074	0.322	0.0%	0.074	0.322
PM-10	0.184	0.4	0.0736	0.322	0.0%	0.074	0.322
SO ₂	0.184	0.018	0.003	0.015	0.0%	0.003	0.015
NO _x	0.184	14.0	2.576	11.283	0.0%	2.576	11.283
VOC	0.184	0.300	0.055	0.242	0.0%	0.055	0.242
CO	0.184	1.90	0.350	1.531	0.0%	0.350	1.531

Note: Emission Factor Source: AP-42 Table 1.5-1, 10/96

Appendix A: Potential Emission Calculations

Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001

Emission Unit	Five (5) Silos		Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Emission Factor Source
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)						
PM	22.3	0.03	0.669	2.930	99.9%	0.001	0.003	Central Soya 145-4300-00035
PM-10	22.3	0.03	0.669	2.930	99.9%	0.001	0.003	Central Soya 145-4300-00035
SO ₂	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
NO _x	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
VOC	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
CO	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	

Appendix A: Potential Emission Calculations

Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Plt ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001

Emission Unit	Truck Receiving		Uncontrolled	Uncontrolled	Control Efficiency (%)	Controlled	Controlled	Emission Factor Source
	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)		Emission Rate (lbs/hr)	Emission Rate (tons/yr)	
Pollutant								
PM	40.0	0.017	0.68	2.978	0.0%	0.680	2.978	AP-42, table 9.9.1-2 5/98
PM-10	40.0	0.0025	0.1	0.438	0.0%	0.100	0.438	AP-42, table 9.9.1-2 5/98
SO2	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
NOx	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
VOC	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	
CO	0.0	0.000	0.000	0.000	0.0%	0.000	0.000	

Company Name: Doane Pet Care Company
Address City IN Zip: 218 NE Lincoln Avenue, Portland, IN 47371
MSOP: 075-13850
Pit ID: 075-00010
Reviewer: Craig J. Friederich
Date: January 29, 2001

Summary of Emissions

Uncontrolled Potential Emissions

Emission Unit	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	HAPS (tons/yr)
Five Natural gas-fired dryers	41.9	42.3	0.081	21.28	0.746	11.4	0.256
Two (2) Boilers	0.319	0.542	0.043	11.16	0.392	5.99	0.135
Three (3) Ovens	0.322	0.548	0.043	11.2	0.397	6.06	0.136
Hammermill (Bliss)	0.526	0.526	0.00	0.00	0.00	0.00	0.00
Hammermill (Champion)	2.35	1.17	0.00	0.00	0.00	0.00	0.00
Extruder #1	1.87	1.04	0.00	0.00	0.00	0.00	0.00
Extruder #2	2.67	1.49	0.00	0.00	0.00	0.00	0.00
Five (5) Silo's	2.92	2.92	0.00	0.00	0.00	0.00	0.00
Truck Receiving	2.98	0.438	0.00	0.00	0.00	0.00	0.00
Total	55.9	51.0	0.167	43.6	1.54	23.5	0.527

Controlled Emissions

Emission Unit	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	HAPS (tons/yr)
Five Natural gas-fired dryers	8.88	9.30	0.081	21.28	0.746	11.4	0.256
Two (2) Boilers	0.319	0.542	0.043	11.16	0.392	5.99	0.135
Three (3) Ovens	0.322	0.548	0.043	11.2	0.397	6.06	0.136
Hammermill (Bliss)	0.003	0.003	0.00	0.00	0.00	0.00	0.00
Hammermill (Champion)	0.470	0.235	0.00	0.00	0.00	0.00	0.00
Extruder #1	0.374	0.208	0.00	0.00	0.00	0.00	0.00
Extruder #2	0.534	0.298	0.00	0.00	0.00	0.00	0.00
Five (5) Silo's	0.003	0.003	0.00	0.00	0.00	0.00	0.00
Truck Receiving	2.98	0.438	0.00	0.00	0.00	0.00	0.00
Total	13.9	11.6	0.167	43.6	1.54	23.5	0.527